# SUBPROVINCE 4

| Restoration Opportunity | Descriptions |
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| ***Salinity control at Oyster Bayou*** | Salinity control in Oyster Bayou with a gated structure or rock weir. Location in Oyster Bayou about 1 mile west of Calcasieu Ship Channel 100-150 feet wide X 10 feet deep; with an approximately 15-20 feet wide X 4 feet deep boat bay. |
| ***Salinity control at Longpointe Bayou*** | Salinity control in Long Point Bayou with a gated structure or rock weir located in Long Point Bayou north of Sabine NWR near Hwy 27 west of Calcasieu Ship Channel (Existing dimensions equal 40 feet wide X 5 feet deep; structure approximate dimensions are 10 to 15 feet wide X 4 feet deep boat bay). |
| ***Salinity control at Black Lake Bayou*** | Salinity control in Black Lake Bayou with gated structure or rock weir with boat bay. Location in Black Lake Bayou north of Hackberry near Calcasieu Ship Channel (Existing bayou dimensions are approximately 150 feet wide X10 feet deep; gated structure or rock weir approximate dimensions equal 25 to 50 feet wide X 6 to 8 feet deep boat bay). |
| ***Salinity control at Alkali Ditch Bayou*** | Salinity control at the Alkali Ditch, northwest of Hackberry, LA at the GIWW, with gated structure or rock weir with barge bay (Existing dimensions are approximately 150 to 200 feet wide X 8 to10 feet deep; structure or weir with approximate dimensions 70 feet wide X 8 feet deep. |
| ***New lock at the Gulf Intracoastal Waterway*** | This measure provides for the replacement of the Calcasieu Lock in the GIWW west of the Hwy 384 Bridge and use old lock for freshwater introduction to the upper Calcasieu estuary from the Mermentau Basin. This measure also provides for freshwater introduction via the Black Bayou Culverts measure at the intersection of Black Bayou and Hwy 384 |
| ***Modify existing Cameron-Creole structures*** | The Cameron-Creole watershed project constructed in 1989 consists of 5 large concrete water control structures and a 16 mile-long levee along the shoreline of Calcasieu Lake. Three of the five structures (Grand Bayou, Bois Connine Bayou, and Lambert Bayou) are adjustable structure with slide gates and the remaining two (Mangrove Bayou and No Name Bayou) are fixed crest weir structures. The fixed crest weir sill heights |

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| | may be set too high. This higher setting could be contributing to the impoundment problem within Cameron-Creole marshes adjacent to those structures. If the weir sills for these two structures could be modified to lower weir crests reduced impoundment, greater water flow and increased fisheries access independent of salinity control at Calcasieu Pass. |
| ***East Sabine hydrologic restoration*** | East Sabine Lake Hydrologic Restoration Project between Sabine Lake and Sabine NWR Pool 3; salinity control structures at Willow Bayou, Three Bayou, Greens Bayou and Right Prong of Black Bayou, terracing, Sabine Lake shoreline protection, & smaller structures. |
| ***Salinity control at Black Bayou*** | Salinity control structure with boat bay at mouth of Black Bayou (either gated structure or a rock weir), located at the intersection of Black Bayou and the northeastern shoreline of Sabine Lake (Existing bayou dimensions are 150 to 200 feet wide X 10 feet deep). |
| ***Salinity control at HWY 82 causeway*** | This measure provides rock weir at Hwy 82 Causeway located in the southern portion of Sabine Lake north of Sabine Pass and the Sabine-Neches Waterway Existing dimensions equal approximately 3,400 feet wide by approximately 4 feet deep except at the approximate 10 feet deep center channel. |
| ***Freshwater introduction at Pecan Island*** | This measure provides for movement of "excess" freshwater from the Mermentau Basin Lake Subbasin across Hwy 82 to the Chenier Subbasin. |
| ***Freshwater introduction at Rollover Bayou*** | This measure provides for movement of "excess" freshwater from the Mermentau Basin Lake Subbasin across Hwy 82 to the Chenier Subbasin. |
| ***Freshwater introduction at HWY 82*** | This measure provides for movement of "excess" freshwater from the Mermentau Basin Lake Subbasin across Hwy 82 to the Chenier Subbasin at the Highway 82 area between Rollover Bayou and Superior Canal to the eastern portion of Rockefeller Refuge. |
| ***Freshwater introduction at Little Pecan Bayou*** | This measure provides for Movement of "excess" freshwater from the Mermentau Basin Lake Subbasin across Hwy 82 to the Chenier Subbasin west of Rockefeller Refuge at the Thibodeaux Bridge. |

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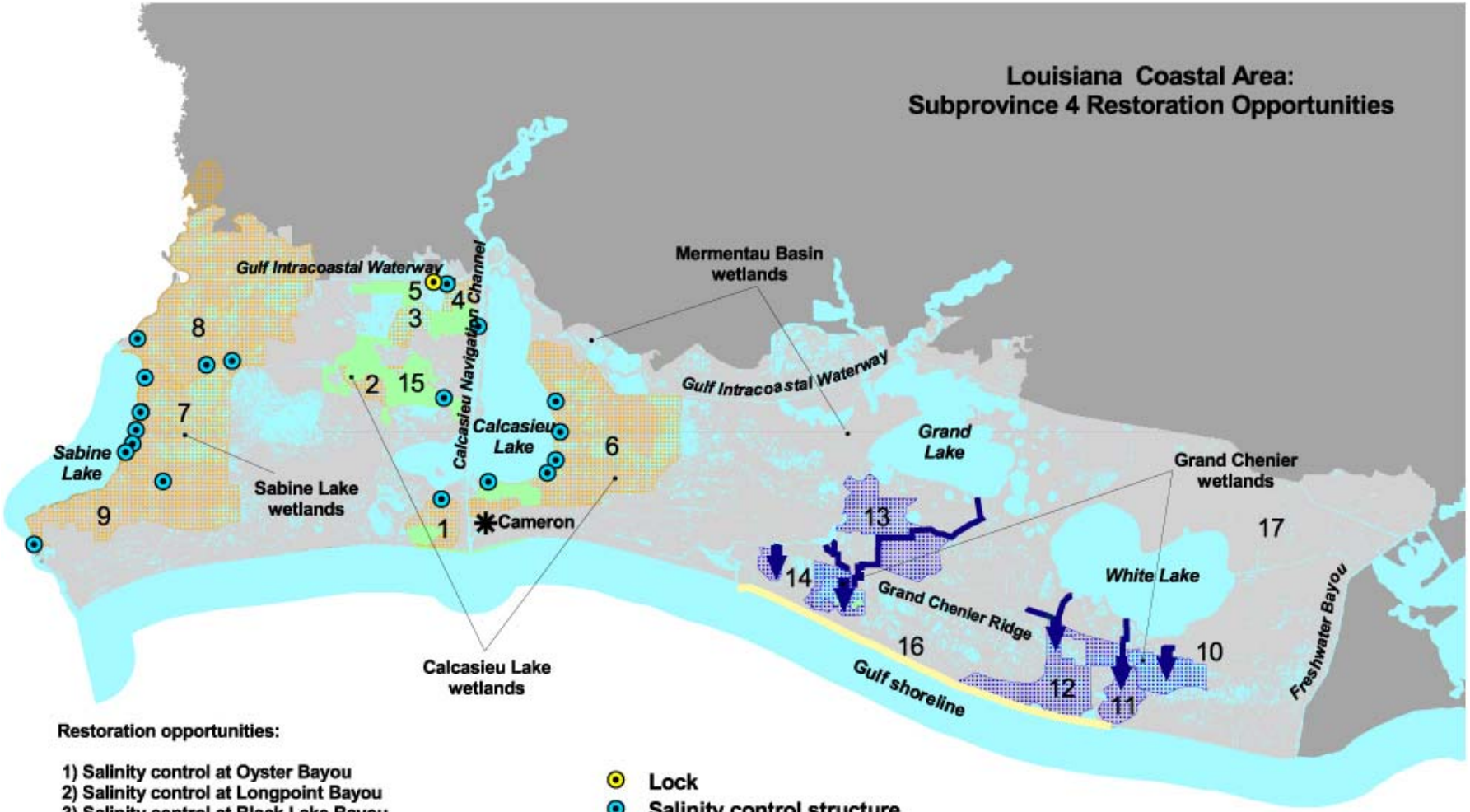
| ***Freshwater introduction at South Grand Chenier*** | This measure provides for movement of "excess" freshwater from the Mermentau Basin Lakes Subbasin from the Mermentau River across Hwy 82 to the Chenier Subbasin Hog Bayou Watershed. |
| ***Calcasieu ship channel beneficial use*** | This measure provides for beneficial use of dredged material from the Calcasieu Ship Channel. |
| ***Gulf shoreline stabilization*** | This measure provides for gulf shoreline stabilization from Mermentau Ship Channel to near Rollover Bayou. Gulf Shoreline Stabilization using rock foreshore dikes, offshore reefs, or segmented breakwaters. Located from Mermentau Ship Channel to near Rollover Bayou east of Rockefeller Refuge. Foreshore dikes 25 to 50 feet gulfward of shore in shallow water 1 to 3 feet deep with gaps every 1,000 feet. Subaqueous rock reef placed 150 to 100 feet gulfward from shore in 2 to 5 feet depth of water. Segmented breakwaters designed similar to Holly Beach Breakwaters placed closer to shore (100 feet or closer) and with narrower gaps (approximately 250 feet long with 50 feet gaps). |
| ***Chenier Plain freshwater management and allocation reassessment*** | This restoration measure requires detailed investigations involving water allocation needs and trade-off analysis in the eastern Chenier Plain, including the Teche/Vermillion Basin, to provide for wetland restoration, and support continued agriculture and navigation in the region. |




**Restoration opportunities:**

1) Salinity control at Oyster Bayou
2) Salinity control at Longpoint Bayou
3) Salinity control at Black Lake Bayou
4) Salinity control at Alkali Ditch
5) New lock at the Gulf Intracoastal Waterway
6) Modify existing Cameron-Creole structures
7) East Sabine hydrologic restoration
8) Salinity control at Black Bayou
9) Salinity control at HWY 82 causeway
10) Freshwater introduction at Pecan Island
11) Freshwater introduction at Rollover Bayou
12) Freshwater introduction at HWY 82
13) Freshwater introduction at Little Pecan Bayou
14) Freshwater introduction at South Grand Chenier
15) Calcasieu ship channel beneficial use
16) Gulf shoreline stabilization
17) Chenier plain freshwater management and allocation reassessment

- Lock
- Salinity control structure
- Freshwater diversion
- Marsh creation
- Salinity control influence
- Freshwater influence
- Subprovince 4
- Shoreline restoration


10 0 10

Miles